EXECUTIVE SUMMARY

ES.1 Introduction/Background

On June 29, 2007, Southern California Edison (SCE) submitted applications to the California Public Utilities Commission (CPUC) and the United States Department of Agriculture (USDA), Forest Service for the construction and operation of the Tehachapi Renewable Transmission Project (TRTP or Project). The TRTP includes new and upgraded transmission infrastructure along approximately 173 miles of new and existing rights-of-way (ROW) in Kern, Los Angeles, and San Bernardino Counties, California. The Project will provide the electrical facilities necessary to integrate new wind generation in excess of 700 megawatts (MW) and up to approximately 4,500 MW located in the Tehachapi Wind Resource Area (TWRA), and strengthen the overall reliability of the electrical grid in Southern California.

In reviewing SCE's application, the CPUC and the USDA Forest Service (Forest Service), as Lead Agencies pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA), determined that the Project could cause a significant adverse effect on the environment and agreed to prepare a joint Environmental Impact Report (EIR) and Environmental Impact Statement (EIS). The Draft EIR/EIS was prepared and distributed on February 13, 2009. On August 26, 2009 the Station Fire started in the Angeles National Forest (ANF). The fire caused widespread damage and burned most of the proposed TRTP transmission alignments through the ANF. As a result, the Forest Service decided to prepare a Supplemental Draft EIS to re-evaluate the Project's effects in light of the changed conditions caused by the Station Fire. These changed conditions did not necessitate the preparation of a supplemental EIR analysis under CEQA. As a result, the process to prepare a joint Final EIR/EIS document was discontinued and the two agencies proceeded to independently complete CEQA and NEPA requirements. The CPUC published a Final EIR for the Project on October 30, 2009. The Final EIR was certified and the necessary permits and decisions were issued by the CPUC on December 24, 2009. The Forest Service prepared a Supplemental Draft EIS, which was completed on April 30, 2010. The Final EIS, which incorporates the analysis of the Station Fire from the Supplemental Draft EIS, was released September 14, 2010. The Forest Service issued a Record of Decision (ROD) on the TRTP on October 4, 2010. The Project, as approved, (i.e., Approved Project) includes a combination of Alternative 2 (SCE's Proposed Project), Alternative 3 (West Lancaster Alternative), Alternative 6 (Maximum Helicopter Construction in the ANF), and Alternative 7 (66-kV Subtransmission), and is referred to herein as the Approved Project, Project, or TRTP for simplicity.

SCE has since constructed portions of the Approved Project and completed final engineering on other portions of the TRTP. In compliance with approved Mitigation Measure L-2b (*Aircraft flight path and safety provisions and consultations*), SCE has consulted with the Federal Aviation Administration (FAA) regarding the new transmission structures to be installed as part of the Approved Project. While Mitigation Measure L-2b required consultation with the FAA, the scope of the FAA's recommendations was not known prior to completion of the Final EIR or Final EIS and was not fully analyzed. Therefore, on October 17, 2011, SCE filed a Petition for Modification of Decision 09-12-044 to modify the TRTP in response to the recommendations of the FAA. Modifications include installation of marker balls on certain transmission line (T/L) spans; installation of aviation lights on certain transmission structures; and engineering refinements in Segment 8 between Chino and Mira Loma Substations to lower certain structures, which would result in changing the previously approved structure type for seven (7) structures. (Note: The CPUC has issued a construction stay for Segment 8A within the City of Chino Hills [Decision 11-11-020, as modified by Decision 12-03-050], which per the July 12, 2012 ruling of the Assigned Commissioner will continue until the CPUC makes a final determination on undergrounding options; Segment 8A undergrounding options are not the subject of this Supplemental EIR/EIS.)

ES.2 Project Description

ES.2.1 Project Objectives, Purpose and Need

The Project's three primary objectives and purpose and need include:

- Provide the electrical facilities necessary to reliably interconnect and integrate in excess of 700 MW[1] and up to approximately 4,500 MW of new wind generation in the TWRA currently being planned or expected in the future, thereby enabling SCE and other California utilities to comply with the California RPS goals in an expedited manner (i.e., 20 percent renewable energy by year 2010 per California Senate Bill 107).[2]
- Further address the reliability needs of the CAISO-controlled grid due to projected load growth in the Antelope Valley.
- Address the South of Lugo transmission constraints, an ongoing source of concern for the Los Angeles Basin.

ES.2.2 Overview of the Approved Project

The Project includes new and upgraded transmission infrastructure along approximately 173 miles of new and existing ROW from the TWRA in southern Kern County south through Los Angeles County and the ANF and east to the existing Mira Loma Substation in Ontario, San Bernardino County, California. The major components of Project have been separated into eight distinct segments (Segments 4 through 11). Under separate application to the CPUC, SCE previously requested approval for Segments 1, 2, and 3 of the Antelope Transmission Project. The major components of the Project are as follows:

- Two new single-circuit 220-kilovolt (kV) T/Ls traveling in parallel approximately 4 miles over new ROW from the Cottonwind Substation (not part of this project) to the new Whirlwind Substation (Segment 4 - 220 kV).[3]
- A new single-circuit 500-kV T/L initially energized to 220 kV, traveling approximately 16.0 miles over new ROW from the new Whirlwind Substation to the existing Antelope Substation (Segment 4 - 500 kV).
- Replace approximately 17.4 miles of the existing Antelope-Vincent 220-kV T/L and the existing Antelope-Mesa 220-kV T/L with only one new T/L built to 500-kV standards in existing ROW between the existing Antelope Substation and the existing Vincent Substation (Segment 5).
- Rebuild approximately 31.9 miles of existing 220-kV T/L to 500-kV standards from existing Vincent Substation to the southern boundary of the ANF. This segment includes the rebuild of approximately 26.9 miles of the existing Antelope-Mesa 220-kV T/L and approximately 5 miles of the existing Rio Hondo–Vincent 220-kV No. 2 T/L (Segment 6).
- Rebuild approximately 15.8 miles of existing 220-kV T/L to 500-kV standards from the southern boundary of the ANF to the existing Mesa Substation. This segment would replace the existing Antelope-Mesa 220-kV T/L (Segment 7).
- Rebuild approximately 33 miles of existing 220-kV T/L to 500-kV standards from a point approximately 2 miles east of the existing Mesa Substation (the "San Gabriel Junction") to the existing Mira Loma Substation (Segment 8A; the construction stay applies to potions within the City of Chino Hills). This segment would also include the rebuild of

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1 The Antelope Transmission Project, which provides 700 MW of transmission capacity, is comprised of three segments: Segment 1 or the Antelope Transmission Project (SCH No. 2005061161) and the Segments 2 & 3 of the Antelope Transmission Project (SCH No. 2006041160) were previously analyzed and approved by the CPUC and Forest Service (Segment 1 only).

2 FERC Order No. 2003 requires all public utilities that own, control or operate facilities for transmitting electric energy in interstate commerce to provide interconnection service to electric generating facilities having a capacity of more than 20 megawatts.

3 Since approval of the TRTP, the Cottonwind Substation has not been built; the two projects expected to connect to the Cottonwind Substation now connect directly to the Whirlwind Substation utilizing the two "Cottonwind-Whirlwind" positions. These positions are now energized with the Manzana Wind Power Project and the Pacific Wind Project. The two single-circuit 220-kV T/Ls approved as part of Segment 4 are no longer necessary and have not been built.

approximately 7 miles of the existing Chino–Mira Loma No. 1 line from single-circuit to double-circuit 220-kV structures (Segment 8B). A new circuit between Chino Substation and approximately 0.8 mile west of the Mira Loma Substation (6.4 miles) would also be installed on the new double-circuit 500-kV structures built as part of Segment 8A (Segment 8C).

- Construct the Whirlwind Substation, a new 500/220-kV substation located near the intersection of 170th Street and Holiday Avenue in Kern County near the TWRA (Segment 9).
- Upgrade the existing Antelope, Vincent, Mesa, Gould, and Mira Loma Substations to accommodate new T/L construction and system compensation elements (Segment 9).
- Build a new 500-kV T/L traveling approximately 16.8 miles over new ROW between the approved Windhub Substation (not part of this project) and the new Whirlwind Substation (Segment 10).
- Rebuild approximately 18.7 miles of existing 220-kV T/L to 500-kV standards between the existing Vincent and Gould Substations. This segment would also include the addition of a new 220-kV circuit on the vacant side of the existing double-circuit structures of the Eagle Rock–Mesa 220-kV T/L, between the existing Gould and Mesa Substations (Segment 11).
- Installation of associated telecommunications infrastructure.

ES.2.3 Overview of the Proposed Modifications (Modified Project)

Final engineering for a given structure is preferred prior to filing a FAA Form 7460-1 (as required by Mitigation Measure L-2b), as specific information regarding the structure height and location is required. Therefore, upon completion of final engineering for various portions of the Project, SCE identified the structures and catenaries (wire spans) that met the FAA's reporting thresholds and submitted Form 7460-1 for each (see Section 1.1.2 for an overview of the FAA consultation process). In response, the FAA issued determinations recommending the installation of marker balls on certain T/L spans and aviation lights on certain transmission structures to increase aviation safety by making hazardous structures (transmission structures and wire spans) more visible to pilots. All determinations from the FAA for the TRTP have been completed. The FAA recommended that marker balls be installed along 276 T/L spans and aviation lights be installed on 90 transmission structures (and associated infrastructure, such as power sources). These modifications would occur within Segments 5, 6, 7, 8, 10, and 11 (Note: Construction within Segment 8A in the City of Chino Hills is stayed). In addition, based on FAA concerns that certain structures near the Chino Airport would interfere with the instrument approach procedure, SCE proposes engineering refinements in Segment 8, Phase 3, of TRTP (Note: Segment 8, Phase 3, was previously referred to as Segment 8A/8C in the Final EIR and Final EIS) between Chino Substation in the City of Chino and Mira Loma Substation in the City of Ontario. These refinements include reducing the height of 21 transmission structures by approximately 20 feet through a combination of shorter tubular steel poles (TSPs) and specially designed dead-end lattice steel towers (LSTs); seven (7) TSPs (previously approved) would be replaced with specially designed dead-end LSTs. The vast majority of the marker balls would be installed by helicopter (see Section 2.3.1.1), and in limited circumstances by spacer cart (see Section 2.3.1.2). Aviation lights would be installed by specialized tower crews after the transmission structures are erected.

ES.3 Purpose of the SEIR/SEIS

This Supplemental EIR/EIS (SEIR/SEIS) for the TRTP has been prepared to inform the public of changes to the Project and the associated environmental impacts resulting from the Modified Project, as well as to meet the needs of the State and federal agencies that will issue permits or other approvals for the Project, as required by CEQA and NEPA. The CPUC has determined that the changes to the Project recommended by the FAA, as described by SCE in the Petition for Modification of Decision 09-12-044 (SCE, 2011b), would result in new or substantially different impacts than disclosed in the Final EIR; however, only minor additions or changes would be necessary to make the previous EIR adequate. Therefore, the CPUC determined that an SEIR is the

appropriate document. Similarly, the Forest Service determined that the proposed changes to the Project would have the potential to result in a substantial change in the environmental impacts disclosed in the Final EIS, and therefore, determined that a SEIS is required. The Forest Service has agreed to be a co-lead agency with the CPUC, and as such, a joint SEIR/SEIS has been prepared.

ES.4 Availability of the SEIR/SEIS

The Draft SEIR/SEIS is available for review at 35 public repositories, including many community libraries, all local Forest Service offices, and several local SCE Service Centers (see Table 5-1). It is also available at the CPUC's office (505 Van Ness Ave., San Francisco, CA 94102), and on the Project website at:

ftp://ftp.cpuc.ca.gov/gopher-data/environ/tehachapi_renewables/TRTP.htm

Copies (on CD/DVD) of the Draft SEIR/SEIS may be requested by email at trtpsuppeir-eis@aspeneg.com.

ES.5 Scope of the SEIR/SEIS

Per State CEQA Guidelines §15163(b), the supplement to an EIR need contain only the information necessary to make the previous EIR adequate for the project as revised. As such, this SEIR/SEIS is focused to include a discussion only of the components and issue area impacts related to the proposed changes to the Project recommended by the FAA. NEPA similarly states that "there shall be only brief discussion of other than significant issues", and "there should be only enough discussion to show why more study is not warranted" (40 CFR 1502.2(b)). The issue areas discussed in detail in this SEIR/SEIS include: Air Quality, Biological Resources, Noise, Visual Resources, and Traffic and Transportation.

ES.5.1 Public Notification of the SEIR/SEIS

The CPUC issued a Notice of Preparation (NOP) of a SEIR/SEIS on September 24, 2012 (see Appendix A.1). This notice was sent to over 4,000 agencies, organizations, residences, and interested parties utilizing the existing TRTP mailing list developed and maintained throughout the environmental review process (2007-2010), and updated to include a revised property owner list based on the latest Assessor's records (see Section 5.1.5 for additional details). The Forest Service published a Notice of Intent (NOI) to prepare a SEIR/SEIS in the *Federal Register* on September 26, 2012 (see Appendix A.1). The NOP was also published once in each of 16 local and regional newspapers between September 24-29, 2012 (see Appendix A.2).

Eleven (11) comment letters were submitted by public agencies in response to the NOP and NOI (see Appendix A.3). Comments were received regarding air quality, biological resources, visual resources, noise, recreation, and safety (related to the use of helicopters). These comments have been addressed, where appropriate, in SEIR/SEIS Sections 4.2 through 4.6, as well as in Section 1.5.2 (Resource Areas Not Addressed in the SEIR/SEIS).

ES.5.2 Resource Areas Not Addressed in the SEIR/SEIS

The following resource areas were adequately addressed in the TRTP Final EIR and Final EIS, and the analyses have not substantially changed as a result of the proposed modifications to the Project. Therefore, no additional significant impacts or substantial increases in the severity of significant impacts would occur and no additional analysis is included in this SEIR/SEIS, as summarized below. All Applicant Proposed Measures (APMs) and approved mitigation measures referenced herein, which are part of the Project and would be applicable to the Project modifications (i.e., Modified Project), are provided in Appendix C for reference.

Agricultural Resources

Marker balls and lights would generally be installed by helicopter on T/Ls and transmission structures already analyzed in the Final EIR and Final EIS (no change in location) and would therefore not appreciably increase the amount of ground disturbance. The T/L alignment in areas where Project modifications would occur traverses no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within Segment 7 and only 3.49 miles within Segment 8; 1.5 miles of grazing lands (Segment 8A) and 9.68 miles of other agricultural lands (Segments 8A/8C and 8B) are also traversed by the alignment. No Williamson Act contract lands are within Segment 7 or 8. Installation of marker balls and lights would be subject to APMs AG-1 through AG-3 and Mitigation Measure AG-1 (*Coordinate construction activities with agricultural landowners*). Operations and maintenance (O&M) activities would include periodic replacement of marker balls, which is expected to occur up to four times over the life of the Project (50 years) using the same construction techniques and activities that would be used during initial installation (i.e., primarily light helicopter access, but also ground-based construction on existing access roads where feasible). These activities would be very short-term and intermittent in nature and would have no impact on agricultural resources. Structural differences between LSTs and TSPs may require slight increases in the transmission structure construction footprint in the existing ROW for the small portion of the line that directly crosses Farmland in Segments 8B and 8A/8C to implement the proposed engineering refinements. This slight potential increase would not substantially increase the temporary or permanent preclusion of the agricultural use of Farmland or cause greater temporary or permanent impacts on agricultural operations. The engineering refinements would also be subject to the APMs and Mitigation Measure AG-1. Therefore, the Modified Project would not result in new significant impacts or substantially increase the severity of previously identified effects in the Final EIR and Final EIS.

Cultural Resources

With implementation of avoidance and protection measures, the Modified Project would not result in any new or increased significant effects to cultural resources beyond those previously identified. Once final design is completed and the APE has been defined fully, additional surveys and evaluations may be necessary, as discussed in Mitigation Measure C-1b (*Inventory cultural resources in the APE*). Cultural resources impacts would be minimized through Mitigation Measure C-1c (*Avoid and protect significant resources*), C-1e (*Develop and implement Historic Properties Treatment Plan*), C-1f (*Conduct data recovery excavation or other actions to reduce adverse effects*), C-1g (*Conduct cultural resources monitoring*), C-1h (*Workers Environmental Awareness Program*), and C-1i (*Protect and monitor NRHP-eligible properties*). O&M activities would have no impact on cultural resources as no additional ground disturbance would occur. With respect to the engineering refinements, a cultural resource records search was completed and revealed that no previously recorded cultural resources or eligible/listed National Register of Historic Places properties are located within the area of impact (SCE, 2011b). A cultural resources pedestrian inventory field survey yielded no cultural or historic properties in the area impacted by the proposed engineering refinements (SCE, 2011b). Due to the absence of identified cultural resources, the proposed engineering refinements can be considered as having a low sensitivity for yielding cultural resources or historic properties. Consistent with Mitigation Measure C-1h, crews working on the Project would undergo training that details the steps taken should unanticipated cultural resources be encountered during construction activities. Therefore, the Modified Project would not result in new significant impacts or substantially increase the severity of previously identified effects in the Final EIR and Final EIS.

Environmental Contamination and Hazards

No new ROW would be needed to implement the proposed modifications. There is no additional potential for unanticipated soil and/or groundwater contamination to be encountered. O&M activities would have no impact

on environmental contamination and hazards as no additional ground disturbance would occur and APMs are in place to avoid introducing contamination. For the engineering refinements, the new LSTs would be located in the exact same locations as the TSPs under the Approved Project thereby resulting in similar environmental contamination and hazards levels. Therefore, the Modified Project would not result in new significant impacts or substantially increase the severity of previously identified effects in the Final EIR and Final EIS.

Geology, Soils, and Paleontology

Installation of marker balls and lights would generally impact the same areas within and along the ROW. Marker balls and lights are also very small compared to the overall size of the transmission structures and would therefore not affect the structural integrity of the transmission structures, and would not have effects on impacts related to surface fault rupture at crossings of active faults; seismically induced groundshaking and/or ground failure; problematic soils; or landslides, earth flows, or debris slides, during operation. O&M activities would have no impact on geology, soils, or paleontology as no additional ground disturbance would occur. The engineering refinements would not substantially increase the severity of effects or affect the geology and soils analysis because the Final EIR and Final EIS accounted for construction, operation, and maintenance of both LSTs and TSPs which are similar between these structure types. The proposed engineering refinements would have no impact and no effect on paleontological resources, as the Project area is situated within sediments that are not sensitive for yielding such resources (SCE, 2011b). Consistent with Mitigation Measure C-1h, TRTP crews working on the Project will undergo training that details the steps taken should unanticipated paleontological resources be encountered. Therefore, the Modified Project would not result in new significant impacts or substantially increase the severity of previously identified effects in the Final EIR and Final EIS.

Hydrology and Water Quality

No additional hydrology and water quality impacts, including increased soil erosion and sedimentation, or increased potential to degrade water quality through accidental release of potentially harmful or hazardous materials are expected to occur. O&M activities would have minimal, if any, impact on hydrology and water quality due to the limited nature and infrequency of occurrence. Therefore, the installation marker balls and aviation lights would not result in new significant effects or substantially increase the severity of previously identified significant effects identified in the Final EIR and Final EIS. The engineering refinements may impact a limited number of waterways in the Project area. However, substituting LSTs for TSPs within the same ROW and in the same locations would not result in a new significant impact or a substantial increase in the severity of a previously identified effect in the Final EIR and Final EIS.

Land Use

Impacts associated with the installation of marker balls and aviation lights would occur within the same ROW and along the same access roads as the Approved Project. Furthermore, construction activities would be subject to the mitigation measures required by the Final EIR and Final EIS, and are a direct result of implementing Mitigation Measure L-2b (*Aircraft flight path and safety provisions and consultations*). O&M activities would have no new impact on land uses as no new areas would be impacted, and the type and scale of activities are similar to other O&M activities disclosed in the Final EIR and Final EIS. Therefore, the installation of marker balls and aviation lights would not result in new significant effects.

Installation of marker balls would increase the level of inconsistency with the 2005 ANF Land Management Plan (Forest Plan). The marker balls would increase the visibility of built structures within the ANF, which would increase the level of the Project's violation of mandatory Forest Plan standards for visual resources, known as Scenic Integrity Objectives (SIO). The Forest Plan was amended by the original ROD, and that

amendment will remain unchanged by the proposed modifications, therefore this is an increase of effects already identified, and is not a new significant impact.

The engineering refinements would essentially lower structures and substitute LSTs for TSPs within the same ROW and in the same locations, and would therefore not impact any additional land uses along the Project alignment. Therefore, the engineering refinements would not result in a new significant impact or a substantial increase in the severity of a previously identified effect in the Final EIR and Final EIS for land use.

Public Services and Utilities

Installation of marker balls would involve primarily helicopter operation (or in limited circumstances, spacer cart), including the use of construction worker and support vehicles, as well as water trucks for dust suppression. Increased helicopter use could result in a marginal increase in adverse impacts to emergency response services, as a result of the increased potential for emergency incidents associated with helicopter construction; increased use and disruption of Public Works maintenance yards during construction, such as the MD1 Road Maintenance Yard located in Baldwin Park (Segment 7); and increase water use during construction. Construction activities would be subject to the APMs and mitigation measures required by the Final EIR and Final EIS, which would reduce impacts. No additional temporary lane closures would be required to implement the proposed modifications; Mitigation Measure T-1a (*Prepare Traffic Control Plans*) requires SCE to inform emergency service agencies of road closures, detours, and delays. O&M activities would have minimal impact on emergency response services or existing maintenance yards due to the limited nature and infrequency of these occurrences. The engineering refinements would not affect the analysis of public services and utilities because the Final EIR and Final EIS accounted for construction of LSTs; and because construction of LSTs would result in a similar need for public services and utilities as construction of TSPs. Therefore, the Modified Project would not result in new significant impacts or substantially increase the severity of previously identified effects in the Final EIR and Final EIS.

Socioeconomics

Marker balls and lights would primarily be installed by helicopter resulting in additional noise impacts and long-term visible changes to the existing environment, and are thus relevant to socioeconomic Issues of Concern: Quality of Life and Private Property Value. While additional helicopter use during construction and O&M would temporarily have an adverse effect on Quality of Life and marker balls and lights may affect Private Property Value, the incremental increase is minimal. Furthermore, the addition of marker balls and lights may actually improve Quality of Life concerns, as the addition of these elements would reduce aviation safety concerns related to transmission structures and conductor.

The installation of marker balls and lights within the ANF would not substantially increase potential adverse effects to Public Revenue, as the modifications would involve identical activities and occur at the same time as those for the Approved Project. If installation were to require a longer duration of recreation area closures, Mitigation Measure R-1e (*SCE shall compensate ANF for lost income from Adventure Pass sales due to recreation area closures associated with the Project*) would reduce this impact. Therefore, the installation of marker balls and aviation lights would not result in new significant impacts or substantially increase the severity of previously identified effects in the Final EIR and Final EIS.

As discussed above under "Agricultural Resources," the engineering refinements may require slight increases in the area of permanent impact within the existing ROW due to the structural difference between LSTs and TSPs for the small portion of the T/L that directly crosses Farmland in Segments 8B and 8A/8C. This slight, potential increase would not increase the temporary preclusion of the agricultural use of Farmland or cause greater temporary impacts on agricultural operations. The engineering refinements would also be subject to the

APMs and Mitigation Measure AG-1 (*Coordinate construction activities with agricultural landowners*). Therefore, the engineering refinements would not result in a new significant impact or a substantial increase in the severity of a previously identified effect in the Final EIR and Final EIS.

Wilderness and Recreation

Construction activities would be subject to the APMs and mitigation measures required by the Final EIR and Final EIS, which would help to minimize the potential for construction activities to restrict access to or disrupt activities within established recreational areas. O&M activities would have minimal impact on wilderness and recreation areas due to the limited duration and infrequency of occurrence. The engineering refinements would not affect the analysis of wilderness and recreation, as the modified structures would occur in the same location as previously identified in the Final EIR and Final EIS resulting in the same impacts. Furthermore, the seven transmission structures to be changed from TSPs to LSTs represent only a small portion of the total number of structures for TRTP, and the lowering of these and adjacent structures would not have any impacts related to wilderness and recreation. Therefore, the Modified Project would not result in new significant impacts or substantially increase the severity of previously identified effects in the Final EIR and Final EIS.

Wildfire Prevention and Suppression

As discussed in the Final EIR and Final EIS, during a wildfire event in the Project area helicopters would be restricted by FAA rules, eliminating any potential interference with aerial firefighting operations. Additionally, implementation of APM HAZ-4 (*Fire Management Plan*) and Mitigation Measure F-1 (*Prepare wildland traffic control plans*) would reduce this impact. SCE proposes to install marker balls made of plastic, aluminum, or fiberglass. Marker balls of these materials would not contribute to wildfire risk. SCE proposes to use LED instead of incandescent light bulbs for the aviation lights, which also would not contribute to fire risk. Marker balls and lights would not affect the height and configuration of the overhead T/Ls and would therefore not change the effectiveness of aerial firefighting, increase the risk of wildfire, or compromise firefighter safety. These activities would occur in the same area as the Project, such that impacts related to the introduction of non-native plants would not change. Furthermore, the increase in visibility of structures would benefit fire suppression activities by increasing safety of air operations. O&M activities would have minimal impact on wildfire prevention and suppression due to the limited nature and infrequency of occurrence. The engineering refinements would occur in areas with adequate road access, such that emergency vehicle access would not be limited; reduced structure heights would improve aerial firefighting; would utilize the same equipment as analyzed in the Final EIR and Final EIS, such that construction would not result in an increase in wildfire risk; would occur in a low fire risk area where overhead T/Ls already exist, such that these changes would not increase the risk of wildfire or compromise firefighter safety; and would occur in the same area as the Project, such that impacts related to the introduction of non-native plants would not change. Therefore, the Modified Project would not result in new significant impacts or substantially increase the severity of previously identified effects in the Final EIR and Final EIS.

Electrical Interference and Hazards

Marker balls and lights would not have noticeable effects on electrical fields, would not induce currents or shock hazards, or affect cardiac pacemakers. Marker balls and lights are extremely small in size relative to the overall size of T/L spans and transmission structures and would therefore not affect structural integrity, such that the effects of wind and earthquakes would not increase. O&M activities would have no impact on electrical interference or hazards, as the replacement of marker balls would not change electrical fields or induce currents or shock hazards. The engineering refinements would also not affect the determinations on electrical interference and hazards identified in the Final EIR and Final EIS, as those determinations accounted for

potential impacts to electrical interference and hazards related to the design, construction, and operation and maintenance for TSPs as well as LSTs. Therefore, the Modified Project would not result in new significant impacts or substantially increase the severity of previously identified effects in the Final EIR and Final EIS.

ES.6 Alternatives

ES.6.1 CEQA and NEPA Requirements for Alternatives Assessment

Both CEQA and NEPA require consideration of a reasonable range of alternatives in an EIR and EIS. The CEQA and NEPA requirements for selection and analysis of alternatives are similar, thereby allowing the use of an alternatives screening and evaluation process that satisfies both State and federal requirements.

CEQA requires that an EIR describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. The range of alternatives discussed in an EIR is governed by a "rule of reason" that requires the identification of only those alternatives necessary to permit a reasoned choice between the alternatives and the proposed project. The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives (as described in State CEQA Guidelines §15126.6(f)(1)) are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the proponent could reasonably acquire, control, or otherwise have access to the alternative site. According to the Council on Environmental Quality's (CEQ) NEPA Regulations (40 CFR. 1502.14), an EIS must present the environmental impacts of the proposed action and alternatives in comparative form, defining the issues and providing a clear basis for choice by decision makers and the public. The CEQ has stated that "[r]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense rather than simply desirable from the standpoint of the applicant" (CEQ, 1983).

ES.6.2 No Project Modifications/No Action Alternative/Approved Project

The No Project Modifications/No Action Alternative would implement the Approved Project (CPUC Decision 09-12-044), as described in Section 2.2 of this SEIR/SEIS. As discussed below, the Approved Project would meet objectives, be feasible, and while visual impacts would be significant and unavoidable, would not result in new significant visual impact related to the addition of FAA marker balls and lights. However, the Approved Project would not comply with FAA safety recommendations resulting in a reduction in aviation safety. Consideration of a No Action alternative is a requirement of both CEQA and NEPA, and forms the basis for comparison of effects of the Modified Project.

ES.6.3 Alternatives Considered but Eliminated

During the scoping process agencies, organizations, and interested parties were consulted to determine a range of alternatives to the Modified Project. Based on this process, only one alternative was considered – The Reduced Structure Height Alternative. This alternative would re-design the Approved Project's transmission structures such that the overall height of the structures would be reduced to minimize the need for FAA marker balls and lighting, to the extent feasible. To maintain the ground clearance requirements of CPUC General Order 95 (GO 95), a greater number of transmission structures would be required along the Project alignment. However, in some instances, such as in mountainous terrain, reduced structure heights may not be feasible and FAA marker balls and lights would continue to be recommended.

This alternative would meet the purpose and need of the TRTP and would be feasible. However, construction of this alternative would result in substantially greater environmental impacts during construction due to the additional ground disturbance. As such, this alternative offers no environmental advantage over the Modified Project without creating greater impacts of its own. Therefore, the Reduced Structure Height Alternative has been eliminated from further consideration.

ES.6.4 CEQA Environmentally Superior Alternative

In accordance with CEQA requirements, an "environmentally superior alternative" must be identified among the alternatives analyzed in an EIR. The environmentally superior alternative is the alternative found to have an overall environmental advantage compared to the other alternatives based on the impact analysis in the EIR. If the environmentally superior alternative is the No Project Alternative, State CEQA Guidelines §15126.6(e)(2) requires the EIR to identify an environmentally superior alternative from among the other alternatives.

As described in Sections ES.6.2 and ES.6.3, the only alternatives to the Modified Project that were considered include: (1) No Project Modifications/No Action Alternative and (2) Reduced Structure Height Alternative. The Reduced Structure Height Alternative was eliminated from consideration as it would result in greater environmental impacts during construction. The No Project Modifications/No Action Alternative (i.e., the Approved Project) would reduce the new significant visual impact resulting from the addition of marker balls and lights associated with the Modified Project, but would not comply with FAA safety recommendations resulting in potential safety impacts to aviation. As such, while the No Project Modifications/No Action Alternative could be considered environmentally superior from the perspective of the natural environment, it would not meet the FAA's safety recommendations which would provide for increased aviation safety by making hazardous structures (transmission structures and wire spans) more visible to pilots. Furthermore, CEQA requires that an EIR identify the environmentally superior alternative from among the other alternatives when the No Project Alternative is the environmentally superior alternative. Therefore, the environmentally superior alternative would be the Modified Project.

ES.6.5 NEPA Lead Agency Preferred Alternative

At this time, and in accordance with NEPA (40 CFR 1502.14(e)), the Forest Supervisor has not identified a preferred alternative. As such, the preferred alternative will be identified in the Final SEIR/SEIS "unless another law prohibits the expression of such a preference" (40 CFR 1502.14(e)).

ES.7 Areas of Controversy, Issues Raised, and Issues to be Resolved

The CPUC issued a Notice of Preparation (NOP) of a SEIR/SEIS on September 24, 2012 (see Appendix A.1). The Forest Service published a Notice of Intent (NOI) to prepare a SEIR/SEIS in the *Federal Register* on September 26, 2012 (see Appendix A.2). Comments received by public agencies in response to the NOP and NOI did not identify any areas of controversy or raise any new issues (see Appendix A.3).

All determinations from the FAA have been completed; based on FAA guidelines, SCE has provided its best estimate of the number of marker balls required based on T/L span lengths. The CPUC and Forest Service, as the Lead Agencies for this SEIR/SEIS, believe that the information presented herein complies with the requirements of both NEPA and CEQA, and provides the decision-makers with adequate information to make an informed decision.

ES.8 Summary of Impacts

ES.8.1 Air Quality

The nominal increase to oxides of nitrogen (NOx), carbon monoxide (CO), volatile organic compounds (VOC), and particulate matter (PM10 and PM2.5) emissions from Modified Project construction activities, even after implementation of all Final EIR and Final EIS mitigation measures, will remain above the South Coast Air Quality Management District (SCAQMD) and Antelope Valley Air Quality Management District (AVAQMD) daily significance thresholds (except for PM2.5 where there is no threshold recommended by AVAQMD). Therefore, the daily regional construction emissions from the Modified Project (Impact AQ-1) would increase the level of significant and unavoidable impacts in the SCAQMD and AVAQMD jurisdictions.

The Modified Project's direct operations and maintenance (i.e., marker ball replacement) emissions would not exceed applicable SCAQMD and AVAQMD thresholds (Impact AQ-2) and would therefore have a less-than-significant impact. Construction of the Modified Project would nominally increase overall emissions during construction, but would not change the maximum localized emissions estimated in the Final EIR and Final EIS. The contribution of the Modified Project construction emissions to localized significance thresholds (Impact AQ-3) would not be significant. Modified Project O&M activities would not increase localized emissions above the SCAQMD thresholds (Impact AQ-4); therefore, a less-than-significant impact to local sensitive receptors would occur.

Toxic air contaminant emissions of the Modified Project would not exceed SCAQMD risk thresholds (Impact AQ-5), therefore resulting in less-than-significant health risk impacts.

The annual construction emissions associated with the Modified Project on NFS lands would be well below the General Conformity *de minimus* limits; a revised General Conformity analysis is not required per regulation (40 CFR part 93.157). The Modified Project would add to the emissions determined for the Project, which were previously shown to exceed the South Coast Air Basin's *de minimus* thresholds applicable at the time of the Project's approved General Conformity analysis (see Final EIR and Final EIS Table 3.3-25) (Impact AQ-6). However, with the ongoing implementation of Mitigation Measure AQ-6 (*General Conformity Emission Offset Mitigation*), these additional construction emissions would be mitigated such that the Modified Project would have a less-than-significant impact.

The odor impacts (Impact AQ-7) from Modified Project construction would continue to be less-than-significant. After mitigation, the Modified Project would be consistent with the currently approved Air Quality Management Plans (Impact AQ-9) and would have a less-than-significant impact.

The Modified Project would continue to create an overall greenhouse gas (GHG) emissions decrease over the Project's life (Impact AQ-10). Additionally, the Project's purpose would implement key strategies for mitigating climate change proposed by the California Energy Commission and the Intergovernmental Panel on Climate Change to improve transmission and increase renewable energy use. Therefore, the Modified Project would continue to provide a beneficial GHG emissions impact. The Modified Project would continue to conform to applicable plans, policies, and regulations related to GHG emission reductions (Impact AQ-10) and would have a less-than-significant impact.

Overall, the Modified Project would not result in any new significant impacts or substantially increase the severity of air quality impacts compared with the Project, and no additional mitigation is proposed.

ES.8.2 Biological Resources

Implementation of the Modified Project would not result in any appreciable increase in ground disturbance, and would not result in any new or substantially different impacts to a majority of biological resources, including native plant communities, jurisdictional waters, wildlife movement or migratory corridors, native wildlife nursery sites, and most special-status plants and wildlife.

Implementation of the Modified Project would result in a minor increase in construction activities to install marker balls and aviation lighting, as well during O&M activities associated with marker ball replacements. Construction and O&M activities associated with the Modified Project are within the scope and magnitude, and are of the same types, as those analyzed in the Final EIR and Final EIS. With the implementation of approved mitigation measures, impacts related to weeds and construction disturbance to wildlife and nesting birds would be less than significant.

Operation of the aviation lights on approximately 90 transmission towers would slightly increase the risk of birds colliding with structures. Use of marker balls on T/L spans would slightly decrease the potential for birds to collide with the lines because they would increase visibility of the lines for birds active during daytime. Bats are not expected to collide with Project structures because of their ability to detect objects much smaller than T/Ls via echolocation. With implementation of raptor safety protection into the Project design, operational impacts to birds and bats would remain less than significant.

In sum, the Modified Project would not result in any new significant impacts or substantially increase the severity of impacts to biological resources compared with the Project, and no additional mitigation is proposed.

ES.8.3 Noise

Routine maintenance of Modified Project components would include replacement of the marker balls up to four times over the 50-year life of the Project. Marker ball replacement would occur similar to that of initial installation, which is a short-term and temporary activity that would not permanently increase the existing ambient noise conditions. Therefore, the analysis of Modified Project noise is limited to temporary activities.

Modified Project activities would not introduce any new noise sources beyond that already considered as part of the Project. Modified Project activities would, however, slightly increase the frequency of significant temporary noise exceedances over ambient conditions to sensitive receptors (Impact N-1). At sensitive receptor locations, Modified Project construction and O&M activities would result in significant, but temporary increases to noise levels over ambient conditions. Implementation of Final EIR and Final EIS APMs and mitigation measures would reduce construction and O&M noise impacts to the maximum degree feasible, but would not eliminate all significant impacts. Therefore, the Project modifications would not substantially increase the severity of temporary noise or change the determinations identified in the Final EIR and Final EIS. No new impacts would occur and no additional mitigation is required.

Modified Project activities would nominally increase the frequency of temporary noise events exceeding ambient conditions, but would not increase the Project's decibel levels. Temporary noise associated with Modified Project would continue to result in short-term, but substantial increases over ambient conditions and would violate local standards (Impact N-2), including the following local jurisdiction noise policies and regulations: Los Angeles County Municipal Code Noise Control Ordinance; City of Baldwin Park General Plan; City of Duarte Municipal Code Noise Ordinance; and City of South El Monte Municipal Code Noise Ordinance. The Modified Project would be consistent with newly promulgated City of Chino noise polices. Therefore, Modified Project activities would not alter the noise consistency analysis provided in Final EIR and Final EIS

for all affected jurisdictions applicable to TRTP Segments 5, 6, 7, 8, 10 and 11. No new impacts would occur and no additional mitigation is required.

ES.8.4 Visual Resources

Installation of marker balls and aviation lights would generally be done in conjunction with the Approved Project. Existing helicopter landing and construction areas would be used, and installation of the marker balls would add only slightly more (four percent) helicopter flight time to the Project construction estimate. The increased presence of construction equipment and personnel would have minimal impact on visual resources due to its limited nature in relation to the Project.

The addition of marker balls to T/L spans would alter the landscape character and visual quality of landscape views and result in adverse and significant impacts (Impact V-8: Proxy for Impact V-3) (Impact V-8) that cannot be mitigated to a less-than-significant level. On NFS lands, Mitigation Measure V-3b would apply (*On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality),* but would not reduce the visual impact of marker balls to a less-than-significant level. Mitigation Measures V-2b *(Treat surfaces with appropriate colors, textures, and finishes)* and V-8 (*Use best environmental practices when installing aviation lighting power sources*) would apply to aviation lighting power sources and would mitigate the visual impact of the aviation power sources to a less-than-significant level, such that the power sources would not substantially alter landscape character and visual quality. However, visual impacts associated with the appearance of marker balls in the landscape would be adverse and significant under Impact V-8. No other feasible mitigation was identified.

The redesign of towers proposed in Segment 8, Phase 3 for the Modified Project would have an adverse but less-than-significant visual impact to landscape character and visual quality under Impact V-3. Redesign would require minor adjustments to tower designs and locations, and would not be readily noticeable from most viewing locations.

Aviation lighting on Project transmission towers would create a new source of substantial night light that would adversely affect nighttime views (Impact V-9). This is a new significant and unavoidable impact, which was not identified for the Approved Project. Aviation lights were found to exceed source intensity light limitations for late night hours (post curfew) in low (wildland and rural) and medium (suburban) brightness areas based on guidance established by the Institute of Lighting Engineers. On NFS lands, Mitigation Measure V-3b would apply (*On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality*), but would not reduce the visual impact of aviation lighting to a less-than-significant level. No other feasible mitigation was identified.

The Modified Project would contribute to the long-term loss and degradation of scenic highway viewsheds and the national scenic trail viewshed (Impact V-6) and visual impacts would be significant and unavoidable. On NFS lands, marker balls would be seen from scenic highways and national scenic trail viewsheds. On non-NFS lands, marker balls and aviation lights would be seen from scenic highways. On NFS lands, Mitigation Measure V-3b would apply (*On NFS lands, provide restoration/compensation for impacts to landscape character and visual quality*), but would not reduce the visual impact of the marker balls to a less than significant level. No other feasible mitigation was identified.

In the Center Area, the Modified Project would contribute to the adverse visual effect of the Approved Project and Scenic Integrity Objectives (SIOs) would continue to decline and not meet Forest Plan Standard S9 (Impact V-7). However, the Forest Service has determined that the Project-specific Forest Plan amendment for the Approved Project (see 2010 ROD) would also apply to the Modified Project (36 CFR 219.17 (c)); therefore, the Modified Project would be consistent with the Forest Plan and result in a less-than-significant impact

in regard to meeting SIO Land Use requirements. In the South Area, the Modified Project, like the Approved Project, would continue to be inconsistent with Visual Goal-1 and Visual Objective-1.2 of the Puente Hills Landfill Native Habitat Preservation Authority Resource Management Plan (PHLHPA RMP), and therefore Impact V-7 would continue to be adverse and significant as identified in the Final EIR and Final EIS. No other feasible mitigation was identified.

ES.8.5 Traffic and Transportation

Installation of marker balls and aviation lights as part of the Modified Project would ensure compliance with the FAA's recommendations and reduce potential aviation hazard impacts to the maximum extent. Additionally, the Modified Project includes engineering refinements to 21 structures in Segment 8, Phase 3 to reduce the structure heights consistent with FAA recommendations, while maintaining required conductor ground clearance. These modifications also ensure compliance with the FAA's recommendations and reduce potential aviation hazard impacts associated with the Approved Project to the maximum extent. As such, the Modified Project is considered to have a beneficial impact to aviation hazards. Therefore, the Modified would not substantially increase the severity of aviation hazard impacts or change the determinations identified in the Final EIR and Final EIS. No new impacts would occur and no additional mitigation is required.

ES.9 Impact Summary

For most resource areas, the modifications to the Project would not introduce any new adverse impacts, and they would not substantially change any existing impacts described in the Final EIR or Final EIS. The construction methods required for the proposed modifications are essentially identical to those used for the Project. There would be an increase in the overall construction and O&M activities, but it would be marginal in comparison to the long and complex process of constructing, operating, and maintaining a high voltage T/L.

A notable exception is visual resources, which would see an increase in the level of significant, adverse impact. The mitigation prescribed in the Final EIR and Final EIS would lessen some impacts on scenery and viewsheds, but the addition of marker balls and aviation lights, designed to increase visibility of the structures, would counter many of these effects. The shortening of some towers may have beneficial visual resource impacts, but they would occur over only a relatively small portion of the T/L alignment, while the marker balls and lights would be more widespread across the Project area.

Implementation of the Modified Project would increase public safety by making hazardous structures (transmission structures and wire spans) more visible to pilots, and is necessary to comply with the recommendations of the FAA, which resulted from filing FAA Form 7460-1 as required by mitigation previously applied to the Project (Mitigation Measure L-2b).